Health File

Influenza: what lies ahead?

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RAMADAAN is a time when we want to be at our physical and mental peak. In South Africa, the month of fasting will fall in the period approaching winter, when the incapacitating influenza season starts peaking.

We need to start arming ourselves against influenza as it can severely impact our ability to derive the optimum benefit of this holy month.

This disease knows no international boundaries and kills more people than war or terrorism.

There were more than 2,8 million new cases of it in Japan in the first week of February 2018.

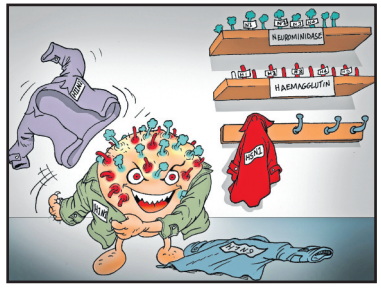
The Centre for Disease Control (CDC) reported 4 000 deaths weekly due to it and its complications in the USA.

In Hong Kong, schools were shut early for the Chinese new year (February 16, 2018) after an outbreak claimed over 120 lives.

This year, it is reported to be the worst outbreak since 2010, with mostly children and the elderly affected. No, we are not talking of a frightening new disease.

In fact, we are talking of the wily foe that annually, somehow, manages to outfox and outwit us by undergoing subtle changes that counter medical science's best attempts to curb its rampant spread.

We are talking about the influenza virus.



The influenza virus mutates rapidly, managing to outfox and outwit us by undergoing subtle changes that counter medical science's best attempts to curb its rampant spread.
Illustration SAAID RAHBEENI

Despite all our technological advancements and surveillance abilities, humankind has not been able to accurately predict a single, severe pandemic. This year is a stark reminder that 100 years ago, the devastation of the 1918 Spanish Flu was evident worldwide.

It is conservatively estimated that more than 50 million humans lost their lives due to the disease, with about 10 million fatalities in India.

South Africa was the fifth most severely affected country, with close to 500 000 deaths. Two waves were recorded in our country, starting from Cape Town and Durban. The well-developed rail and sea transport system at that time facilitated the spread of the pandemic.

Since the disease primarily affected young adults aged between 18 and 40, a staggering 900 000 children were orphaned in our country.

It was always considered that most pandemics would originate from Asia. Most of the earth's land mass and population are found there, and close interaction between humans and animals most commonly occurs there.

The rationale was that one of these influenza viruses would mutate into a virulent form and start the next human influenza pandemic from China or one of its neighbours.

The 1957 pandemic spread from mainland China and spread worldwide within six months. The 1968 one started in Hong Kong and rapidly spread.

Avian influenza, more commonly known as bird flu, has been known to affect wild birds and poultry on the Chinese mainland. These viruses, such as H5N1, occasionally crossed the species barrier and infected humans. When this happened, H5N1 had a 50 per cent mortality in humans.

Again, the virus was able to outmanoeuvre the unsuspecting human race. The H1N1 pandemic of 2009 started in Mexico, in about March, and very rapidly spread along the international travel routes.

Since the vast majority of flights departing Mexico flew to North America and Europe, the disease, called swine flu, first manifested there before spreading to the rest of the world. By July 2009, virtually all countries had reported cases.

Computer modelling has shown that stopping the spread would have been near impossible. If, for example, travel out of Mexico had been curtailed by 40 per cent, the rate of the spread of swine flu would have been delayed by only two days.

Had the traffic out of Mexico been decreased by 90 per cent, the rate would have slowed by only two weeks!

We are discovering more and more about this fascinating virus. A type called H11N2 was discovered in Antarctica, in 2014. What was fascinating about this virus was that it contained genetic material from strains found in the northern and southern hemispheres.

It has been postulated that migratory birds, such as the giant petral, flies thousands of kilometres from Antarctica to Central America and acquires different influenza strains there and then takes it back to the frozen wastelands where the different viruses mutate and exchange genetic material.

The potential exists that one of these mutated strains may be extremely infective in humans and, if it is somehow carried to large settlements, may initiate the next pandemic.

The swine flu pandemic also shed some important light on animal-human virus transmission. It is now known that humans transmit far more influenza viruses to swine than swine transmit to humans. Human-to-swine transmission is actually the key to the evolution of influenza diversity in swine and, in effect, humans sow the seeds of future pandemics by infecting swine.

Influenza is often considered a trivial disease but the South African death statistics tell a different, horrifying story.

Tuberculosis is still the number one killer in our country. Influenza and pneumonia, which is grouped as one entity for death statistics purposes, has been the second leading cause of death from 2009 till 2013.

The introduction of a very effective vaccine against pneumonia has led to influenza/ pneumonia falling to the sixth leading cause of death by 2015.

Vaccination is going to be key in the fight against this avoidable disease.

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